Appl. No. 09/995,051 Amdt. Dated April 30, 2004 Reply to Office action of December 3, 2003

## **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

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Claim 1 (Original): A device for generating an image from an IR radiation comprising a detection module (1) including a plurality of heat detectors (2) each having a specific electric resistance and being polarised so as to deliver a signal representing a detected IR radiation, said device comprising a read module (8) intended to convert said electric signal into a signal which can be used by an image processing block (18) and an electric signal compensation module (10) comprising a first branch (12) making it possible to carry out a first thresholding intended to extract from said electric signal a first constant value signal due to the polarisation of the heat detectors (1), a device characterised in that the compensation module (10) comprises at least one second branch (30) making it possible to carry out a second thresholding intended to extract from the electric signal resulting from the first thresholding at least one second low-level signal due to the dispersion of the electric resistances of the heat detectors and/or to the fluctuations in the temperature of the focal plane of the detection module.

Claim 2 (Original): A device according to claim 1, characterised in that said second branch (30) is connected to a correction circuit (32) intended to generate, for each heat detector, a specific setting allowing the extraction of said

- 5 second signal to be controlled.
- 1 Claim 3 (Original): A device according to one of claims 1
  2 or 2, characterised in that the second branch (30) comprises a
  3 passive heat detector (34) mounted in series with a second
  4 transistor (36) the conduction of which is controlled by said
  5 specific setting.
- Claim 4 (Original): A device according to claim 2, characterised in that the second branch (30) comprises only a current source and a first control transistor (36) the conduction of which is controlled by said specific setting.
- Claim 5 (Original): A device according to claim 1, characterised in that the second branch (30) comprises a plurality of subbranches (52,54,56) mounted in parallel, each sub-branch being able to conduct a pre-set current.
- Claim 6 (Currently amended): A device according to one of
  the claims claim 1 to 4, characterised in that the first branch
  (12) comprises a passive heat detector (14) provided in series
  with a first control transistor (22) the conduction of which is
  controlled by a constant voltage.
- 1 Claim 7 (Original): A device according to claim 6, 2 characterised in that each heat detector (2) is constituted by 3 a micro-bolometer.

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- 1 Claim 8 (Currently amended): A device according to claims
  2 claim 3 and 7, characterised in that the second passive
  3 micro-bolometer (34) of the second branch (34) has a high
  4 resistance relative to the resistance of the first passive micro5 bolometer (14) of the first one (12).
- 1 Claim 9 (Original): A device according to claim 3,
  2 characterised in that the correction circuit (32) comprises a
  3 generator (40) intended to provide a digital setting, a
  4 digital-to-analogue converter (42) intended to convert said
  5 digital setting into analogue voltage so as to control the second6 transistor (36).
- 1 Claim 10 (Original): A device according to claim 9, 2 characterised in that the correction circuit (32) additionally 3 comprises an attenuation module (44).
- 1 Claim 11 (Original): A device according to claim 4,
  2 characterised in that the correction circuit (32) comprises a DC
  3 voltage generator (50) intended to supply a DC analogue voltage
  4 allowing the current in said second branch (30) to be regulated.
  - Claim 12 (Currently amended): A device according to one of the claims 1 to claim 11, characterised in that the compensation block (10) comprises a control loop making it possible to re-inject into each of the thresholding branches (12),(30) a measurement of the temperature of the focal plane of the detection module (1) so as to modulate the values of the signals

- 7 extracted by the first branch (12) and the second branch (30) as
- 8 a function of the temperature of the focal plane of detection.
- 1 Claim 13 (Original): A device according to claim 12,
- 2 characterised in that the active micro-bolometers (2) are
- 3 distributed over the focal plane of the detection device in M
- 4 lines and N columns.
- 1 Claim 14 (Original): A device according to claim 9,
- 2 characterised in that the digital-to-analogue converter (42) is
- integrated monolithically with the micro-bolometer (2).
- 1 Claim 15 (Currently amended): A device according to one of
- 2 the claims claim 1-to-14, characterised in that one of the first
- 3 and second branches (12,30) is dedicated to compensating for
- 4 resistance dispersions and the other branch is dedicated to
- 5 compensating for temperature fluctuations in the focal plane.
- 1 Claim 16 (Original): A device according to claim 15,
- 2 characterised in that the second branch (30) comprises two
- 3 sub-branches, each sub-branch including a balanced current source
- 4 associated with a switching transistor controlled by a digital
- 5 signal.
- Claim 17 (Original): A process for correcting an electric
- 2 signal representing an IR radiation detected by a heat detector
- 3 (2) having a specific electric resistance, said process
- 4 comprising a first stage allowing a first polarisation signal

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- 5 having a constant value to be extracted from the electric signal,
- 6 a process characterised in that it comprises a second stage
- 7 consisting in extracting from the electric signal a second
- 8 signal, of low level relative to the first signal.
- Claim 18 (Original): A process according to claim 17,
- 2 characterised in that it comprises a stage consisting in
- 3 generating a specific setting allowing the extraction of said
- 4 second signal to be controlled.
- 1 Claim 19 (Original): A process according to claim 18,
- 2 characterised in that it comprises a heat detector (2)
- 3 calibration phase comprising the following stages:
- 4 a) defocusing the scene;
- 5 b) storing the signal resulting from the previous stage;
- 6 c) using the stored signal to control the extraction of
- 7 the low level signal.

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**Amendments to the Drawings:** 

The attached sheet of drawings includes changes to Figs. 1 and 2. This sheet, which includes

Figs. 1 and 2, replaces the original sheet including Figs. 1 and 2. The figures have been labeled "Prior

Art".

Attachment:

Replacement Sheet

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